What we claim is:

1. A bond-ply material comprising a core having a first surface and a second surface wherein the core has a thickness of from about 5 microns to 200 microns and including from about 20% and 70% non-woven reinforcement material selected from glass microfibers, organic fibers and mixtures thereof impregnated with a polymer.

2. The bond-ply material of claim 1 wherein a B-stage resin layer having a thickness of from about 2 micrometers to about 200 micrometers covers core first surface, core second surface, or both core first surface and core second surface.

3. The bond-ply material of claim 2 wherein a release film covers each B-stage resin layer.

4. The bond-ply material of claim 2 wherein the core is a C-stage core.

5. The bond-ply material of claim 1 including a plurality of vias perpendicular to the plane of the material.

6. The bond-ply material of claim 5 wherein at least one via is filled with an electrically conductive material or a conductor precursor.

7. The bond-ply material of claim 1 wherein the nonwoven reinforcing material is a mixture of micro-fiber glass and organic fibers.

8. The bond-ply material of claim 7 wherein the nonwoven reinforcing material includes from about 10 to about 90 wt % of micro-fiber glass and from about 10 to about 90 wt % of a second reinforcing material selected from organic fibers, organic microfibers, organic pulp and mixtures thereof.

9. The bond-ply of claim 7 wherein the organic fibers are selected from Poly (p-phenylene-2,3-benzobisoxazole) staple fibers, pulp, microfibers and mixtures thereof.

10. The bond-ply of claim 1 including a plurality of essentially undamaged laser ablated vias having diameters of from 5 to 150 micrometers.

11. The bond-ply material of claim 8 wherein at least 80% of the micro-fiber glass has a diameter of less than about 1 micron.

12. The bond-ply material of claim of claim 7 including from about 5 to about 55 wt % of non-woven reinforcing material and from about 45 to about 95 wt % polymer selected from a thermoplastic polymer and a B-stage thermosetting resin and mixtures thereof.

13. A method for interconnecting high density electronic circuits comprising the steps of:

(a) forming a bond-ply material comprising a core having a first surface and a second surface wherein the core has a thickness of from about 5 microns and 200 microns and including from about 20% and 70% non-woven reinforcement material selected from glass microfibers, organic fibers and mixtures thereof impregnated with a polymer;

(b) forming a plurality of vias in the bond-ply material;

(c) filling the vias with an electrically conductive material selected from a conductive paste or conductor precursor;

(d) placing the bond-ply material between a first circuit element having at least one circuit region and a second circuit element having at least one circuit region such that the electrically conductive material located in at least one via contacts at least one circuit region associated with the first circuit element and at least one circuit region associated with the second circuit element to form an uncured multi-layer circuit; and

(e) curing the uncured multi-layer circuit at a pressures of from 0 and 1000 psi and at a temperature of from 25 to about 400 °C to form a cured multi-layer circuit.

14. The method of claim 13 wherein the electrically conductive material is a conductor precursor that is activated by curing.

15. The method of claim 13 wherein a B-stage resin layer having a thickness of from about 2 micrometers to about 200 micrometers covers core first surface, core second surface, or both core first surface and core second surface.

16. The method of claim 15 wherein a first B-stage resin layer covers the core first surface and a second B-stage resin layer covers the core second surface and wherein a copper release film covers each B-stage resin layer.

17. The method of claim 13 wherein the core of the bond-ply material is a C-stage core.

18. The method of claim 13 wherein the bond-ply nonwoven reinforcing material is a mixture of micro-fiber glass and organic fibers.

19. The method of claim 18 wherein the bond-ply material includes from about 5 to about 55 wt % of non-woven reinforcing material and from about 45 to about 95 wt % polymer selected from a thermoplastic polymer and a B-stage thermosetting resin and mixtures thereof.

20. The method of claim 18 wherein the nonwoven reinforcing material includes from about 10 to about 90 wt % of micro-fiber glass and from about 10 to about 90 wt % of a second reinforcing material selected from organic fibers, organic microfibers, organic pulp and mixtures thereof.

21. The method of claim 19 wherein the organic fibers are selected from Poly (p-phenylene-2,3-benzobisoxazole) staple fibers, pulp, microfibers and mixtures thereof.

22. The method of claim 13 wherein the vias are essentially undamaged microvias having diameters of from 0.5 to 6.0 mils.

23. A multilayer printed circuit board fabricated using a bond-ply material comprising a core having a first surface and a second surface wherein the core has a thickness of from about 5 microns and 200 microns and including from about 20% and 70% non-woven reinforcement material selected from glass microfibers, organic fibers and mixtures thereof impregnated with a polymer.